REMARKS

Claims 1-29 remain pending in this application. Claims 24-29 are added by this paper.

Response to Arguments

The Examiner states on p. 2 of the Detailed Action that Luciano "would clearly have simulation rule data as it would employ collision detection, which is widely known in the art of video games," and that the vehicle embodiment Luciano would "clearly include dimensions and center of gravity." However, there is nothing in Luciano to support this contention. Rather Luciano, is concerned with the dexterity of the player with regards to pushing buttons, or moving a joy stick quickly. In fact, Luciano describes that within the driving game, "the probability of a successful outcome may depend on *how quickly the player provides input* to veer a simulated vehicle away from a simulated obstacle" (emphasis added). The Examiner additionally states that "the motion of the vehicle as a whole would most likely be calculated based on the motion of its center of gravity, with the dimensions being used to detect when the simulated vehicle collides with the simulated obstacle." However, Luciano provides no support for such a statement. Therefore, the Examiner is going beyond what is disclosed, even implicitly disclosed, by Luciano when forming the basis of the rejection. The Applicant continues to respectfully believe that Luciano fails to disclose or suggest physical object data or simulation rule data.

Claim Rejections Based on Prior Art
Rejection based on Fentz

Claim 23 is rejected under 35 U.S.C. § 102(b) as being anticipated over U.S. Pat. No. 5,775,993 to Fentz et al. ("Fentz"). Fentz discloses an electronic gaming machine for simulating a roulette game. Fentz discloses that a random number generator generates a winning number, and based upon that winning number, the video system will display a ball being placed in the roulette wheel and bouncing into the generated winning number. Col. 8, l. 56 – Col. 9, l. 6. Fentz additionally discloses that once the winning number is confirmed, a bounce pattern

previously coded into the device is selected. Col. 10, ll. 39-62. Once the bounce pattern is selected, the start and stop points for the movement of the ball in the outer track of the roulette wheel, the movement of the ball from the outer track to the winning number, and finally the movement of the ball within the winning number. Fentz further discloses data used to provide the movement of the ball as shown in FIGS. 10-11 in Table I and Table II. Col. 11, l. 43 – Col. 12, l. 51. Thus, Fentz teaches that one of several pre-determined paths of movement will be utilized to place the ball within the winning number and all that the computer will modify is the start and stop points of the pattern so that the ball ends in the generated winning number. Thus, Fentz does not utilize physical object data related to the ball to determine where the ball's motion will stop.

Claim 23 of the pending application depends from claim 8, and claim 8 recites "accessing physical object data," "mathematically modeling game actions of one or more physical objects within a simulation world using said physical object data and said simulation rule data, wherein the simulation rule data includes performance tendencies of the physical object." "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP § 2131. Fentz discloses an apparatus that only uses predefined ball paths to place the ball into the generated winning number. Fentz discloses no physical object data regarding the ball, or mathematically modeling the movement of the ball utilizing the physical object data of the ball. Further, Fentz in no way discloses the simulation rule data including performance tendencies of the physical object. Therefore, Fentz fails to teach, disclose, or suggest all of the limitations of claim 23. Therefore, Fentz does not

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anticipate or render obvious claim 23, and Applicant respectfully requests that this rejection be withdrawn.

Rejections based on Luciano in view of Ohshima

Claims 1, 2, 5, 7, and 15, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,050,895 to Luciano, Jr. et al. ("Luciano") in view of U.S. Pat. No. 6,045,446 to Ohshima ("Ohshima").

One basic requirement for a *prima facie* case of obviousness is that the prior art references must teach or suggest all of the claim limitations. M.P.E.P. § 2143. Luciano in view of Ohshima does not satisfy this test.

Luciano discloses a "hybrid" gaming apparatus that is adapted to contain two types of games: (1) a coordination/dexterity game ("dexterity games"), and (2) a traditional wagering game ("wagering games"). Luciano, col. 5, ll. 42-44. Luciano discloses several different types of dexterity games including a space shooting game, a golf game, and a boxing game. *Id.*, col. 3, ll. 65-67. However, one feature common to all dexterity games is that the amount of time a user requires to provide a certain input to the game determines the result of the dexterity game. *Id.*, col. 5, ll. 3-10. The "hybrid" gaming device of Luciano requires the user to play the dexterity games to trigger the ability to play the wagering games. *Id.*, col. 5, l. 44-66. Luciano recites that the triggering event may be a normal occurrence of the dexterity games, or the triggering event may be unrelated to an outcome of the dexterity game. *Id.*, col. 6, ll. 8-21. Luciano discloses various methods of allowing a user to trigger the wagering game: from the occurrence of various predefined events in the dexterity game, to allowing the user to participate in the wagering game after every play of the dexterity game with a modifiable paytable of the wagering game depending on the result of the dexterity game. *Id.*, col. 7, l. 2 - col. 8, l. 4.

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Luciano in no way discloses or suggests "a system memory containing physical object data and simulation rule data" or "a central processor for processing said physical object data and said simulation rule data to produce a realistic depiction of gaming activity on said display."

Ohshima discloses a video game that depicts the track and field event of hammer throwing. Ohshima in no way discloses any type of wagering based on the video game, and discloses no "means for receiving a wager" and further fails to disclose or suggest "awarding a payoff based on an outcome of said gaming activity." Rather, Ohshima discloses how to graphically model a hammer throw, including depicting an "object-throwing guide" arrow to allow a user to know the direction the thrown object will travel. Ohshima, col. 9, ll. 55-66. Ohshima further discloses that the arrow will change colors to allow the user to know how many turns the hammer thrower has made to allow the user when to know to release the hammer. *Id.*, col. 12, ll. 30-48. Ohshima additionally discloses that the color of the arrow changes to indicate to the user how many more turns can be made and still have a valid throw. *Id.*, col. 10, ll. 21-52.

Ohshima also teaches a method of conducting a throwing game that involves having a player pressing a first button to initiate the throwing game, and pressing a second button at an optimum time to throw the object of the game. *Id.*, col. 14, l. 38 - col. 16, l. 63. The number of times the user presses the first button until the second button is pressed increases the speed at which the thrower in the game rotates to increase the potential distance of the throw. *Id.*, col. 14, l. 66 - col. 15., l. 16. Thus, Ohshima teaches a throwing game and a method of conducting the same, where the skill of the user always determines the outcome of the game.

Ohshima fails to teach or suggest any physical object data, such as, for example, the mass of the hammer, or the mass of the thrower depicted in the game. Ohshima, thus also fails to disclose "a central processor for processing said physical object data."

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Independent Claim 1

Independent claim 1 of the pending application recites "a system memory containing physical object data and simulation rule data, wherein the simulation rule data includes performance tendencies of the physical object," as well as "a central processor for processing said physical object data and said simulation rule data to produce a realistic depiction of gaming activity on said display." The present invention relates to a gaming machine that provides a real-time graphical rendering of gaming events. The gaming machine utilizes physical object data, motion capture data, and simulation rule data, either alone or in combination, to simulate real-world physical phenomena. U.S. Pat. App. No. 10/657,650, p. 9, ll. 7-25. Physical object data may comprise "types of information about physical objects whose motions and interactions are to be simulated." *Id.*, p. 9, ll. 26-27. Non-limiting examples of physical object data include the "mass, dimensions, elasticity, and center of gravity of a simulated object." *Id.*, p. 9, ll. 27-28. Simulation rule data may comprise "a set of parameters describing how simulated objects should work together within a simulated environment to provide an entertaining activity for wagering." *Id.*, p. 10, ll. 15-17. Simulation rule data "comprises rule data designed to mimic as closely as possible activities within the real world." *Id.*, p. 10, ll. 17-19.

As previously described, neither Luciano nor Ohshima disclose or suggest a system memory containing physical object data and simulation rule data, let alone "a central processor for processing said physical object data and said simulation rule data to produce a realistic depiction of gaming activity on said display." Further, neither Luciano nor Ohshima disclose or suggest "the simulation rule data includes performance tendencies of the physical object."

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Therefore, Luciano in view of Ohshima fail to set forth a *prima facie* case of obviousness, as at least one limitation of claim 1 is not taught or suggested by the applied references.

Dependent Claims 2 and 5

Dependent claims 2 and 5 depend either directly or indirectly from independent claim 1. As not all of the limitations of claim 1 are taught or suggested by Luciano in view of Ohshima, not all of the limitations of claims 2 are taught or suggested by Luciano in view of Ohshima. Dependent claim 5 depends directly from dependent claim 4. The Examiner has *not* rejected dependent claim 4 as being unpatentable over Luciano in view of Ohshima. Thus, as the Examiner has not indicated that all of the limitations of claim 4 are taught or suggested by Luciano in view of Ohshima, the Examiner has failed to make a *prima facie* case of obviousness for claim 5.

Independent Claim 15

Independent claim 15 recites "simultaneously simulating and displaying in real time an interaction of simulated physical objects using a representation of three-dimensional forms, wherein the interaction of the simulated physical objects include performance tendencies," as well as "determining an outcome of said interaction," and "awarding a payoff if said outcome meets winning criteria." As described in conjunction with block 40 of FIG. 3 of the pending application, "the gaming machine creates a 3D, real-time simulation world within which game activities occur." U.S. Pat. App. No. 10/657,650, p. 6, ll. 17-18. As further described in conjunction with FIG. 3, "the CPU 26 may access rules relating to a world from the system memory 30 and forward those rules to the 3D processor 34 for graphical rendering of the effects of the rules on graphical objects within a simulated world." *Id.*, p. 6, ll. 25-28.

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Luciano in no way discloses or suggests such limitations or interactions. Rather, as previously described Luciano discloses a "hybrid" gaming apparatus. Luciano fails to teach or suggest an interaction of simulated physical objects using a three dimensional form. Thus, Luciano also fails to disclose or suggest "determining an outcome of said interaction," and "awarding a payoff if said outcome meets winning criteria," as recited by independent claim 15.

As previously described, Ohshima fails to teach or suggest physical object data. Thus, Ohshima fails to teach or suggest "simultaneously simulating and displaying in real time an interaction of simulated physical objects using a representation of three-dimensional forms" as recited in claim 15.

Further, neither Luciano nor Ohshima disclose or suggest "the interaction of the simulated physical objects include performance tendencies."

Therefore, Luciano in view of Ohshima fail to set forth a *prima facie* case of obviousness, as at least on limitation of claim 15 is not taught or suggested by the applied references.

Dependent Claims 17, 19, and 20

Dependent claims 17, 19, and 20 depend either directly or indirectly from independent claim 15. As not all of the limitations of claim 15 are taught or suggested by Luciano in view of Ohshima, not all of the limitations of claims 17, 19 and 20 are taught or suggested by Luciano in view of Ohshima. Dependent claims 19 and 20 depend directly from dependent claim 18. The Examiner has *not* rejected dependent claim 18 as being unpatentable over Luciano in view of Ohshima. Thus, as the Examiner has not indicated that all of the limitations of claim 18 are taught or suggested by Luciano in view of Ohshima, the Examiner has failed to make *prima facie* cases of obviousness for claims 19 and 20.

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Rejections based on Luciano, Ohshima, and French

Claims 3, 4, 6, 8-14, 16, 18, 21, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luciano and Ohshima in view of U.S. Pat. No. 6,308,565 to French et. al. ("French").

The Office Action asserts that the system for assessing the movement and agility skills disclosed in French is analogous to the game to be played on the gaming machine of the present application. Simply put, French is directed to a fundamentally different type of system than that employed in a casino environment with gaming machines.

For a reference to be considered "analogous," the reference must "either be within the field of applicant's endeavor or, if not, then must be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446 (Fed. Cir. 1992). A reference is "reasonably pertinent" if it "would have logically commended itself to an inventor's attention in considering his problem." *Wang Labs., Inc. v. Toshiba Corp.*, 993 F.2d 858 (Fed. Cir. 1993). Here, French relates to a system for assessing movement and agility skills using motion capture of a player being evaluated.

The test for determining whether a reference is "reasonably pertinent" is *not* whether the reference may have been considered analogous to the inventor. Instead, the test for determining whether a reference is "reasonably pertinent" is whether the reference would have *logically* commended itself to some other potential inventor's (*i.e.*, some other person) attention in considering the problem faced by the present inventors. Applicant continues to submit that French would not have logically commended itself to an inventor of the claimed systems and methods.

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The Examiner must approach the obviousness issue from the view-point of one using ordinary skill in the art who is not an innovator but follows conventional wisdom. *See In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1993). It is *immaterial* that the inventor himself arrived at the claimed combination of elements.

Further, the classifications of the applied references is evidence of non-obviousness that must be considered by the Examiner. French is primarily classified under **U.S. Cl. 73/379.04**, entitled "Measuring and Testing" subpart 379.04 relating to "Muscular Force (e.g., Strength Testing, Exercising or Training Effort, etc.), Impact" In contrast, Luciano is primarily classified under **U.S. Cl. 463/7**, titled "Amusement Devices: Games," subpart 7 "Including Means for Processing Electronic Data (e.g., computer/video games, etc.); In a game requiring an element of a participant's physical skill or ability (e.g., hand-eye coordination, reflex, etc.)." Ohshima is primarily classified under **U.S. Cl. 463/2**, titled "Amusement Devices: Games," subpart 2 "Including Means for Processing Electronic Data (e.g., computer/video games, etc.); In a game including a simulated projectile (e.g., bullet, missile, ball, puck, etc.)." There is absolutely no overlap or commonality in the classifications of these references or in the fields of search considered relevant by examiners prosecuting these applications. This constitutes evidence of non-obviousness.

For at least the foregoing reasons, Applicant continues to believe that French is non-analogous art to the problem at hand, and therefore is not an appropriate prior-art reference to be used for an obviousness-type rejection for any of the pending claims. The user of an amusement device would not be concerned with testing or measuring muscular force as it relates to impact.

Dependent Claims 3, 4, 5, and 6

Dependent claims 3, 4, 5, and 6 depend directly from independent claim 1. As has been previously explained, Luciano in view of Ohshima fails to set forth a *prima facie* case of obviousness, as at least one limitation of claim 1 is neither taught nor suggest by the applied references. As French is non-analogous art, it may not be used for an obviousness type rejection, and thus claims 3, 4, 5, and 6 are patentable over Luciano in view of Ohshima. Further, French in no way discloses or suggests "simulation rule data includes performance tendencies of the physical object," as recited in claim 1. Therefore, even if French is considered, at least one limitation of claim 1 is neither taught nor suggested by the applied references.

Independent Claim 8

In addition to the fact that French is non-analogous art, even if it were analogous art, the proposed combination still fails to disclose all the limitations of independent claim 8. Independent claim 8 recites several limitations, among them "accessing physical object data," "accessing simulation rule data," and "mathematically modeling game actions of one or more physical objects within a simulation world using said physical object data and said simulation rule data, wherein the simulation rule data includes performance tendencies of the physical object."

As previously described in connection with independent claim 1, neither Luciano nor Ohshima disclose or suggest accessing physical object data, let alone "mathematically modeling game actions of one or more physical objects within a simulation world using said physical object data and said simulation rule data, wherein the simulation rule data includes performance tendencies of the physical object." Therefore, Luciano in view of Ohshima and further in view of French fail to set forth a *prima facie* case of obviousness, as at least on limitation of claim 8 is

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not taught or suggested by the applied references. French describes a system that allows a

person to move within a defined physical space and tracks the persons movements within this

space using sensors to generate a video signal of the user. French, col. 8, ll. 23-34. The video

signal includes a virtual space corresponding to the defined physical space so that a monitor can

display an approximation in virtual space of the actual the movements of the user within the

defined space. *Id.*, col. 8, ll. 43-48. Thus, French tracks *actual* movements of a user, and does

not disclose the recited limitation of "mathematically modeling game actions of one or more

physical objects within a simulation world using said physical object data and said simulation

rule data, wherein the simulation rule data includes performance tendencies of the physical

object."

Dependent Claims 9-14, and 23

Dependent claims 9-14, and 23 depend either directly or indirectly from independent

claim 8. As has been previously explained, Luciano in view of Ohshima fails to set forth a *prima*

facie case of obviousness, as at least one limitation of claim 8 is neither taught nor suggest by the

applied references. As French is non-analogous art, it may not be used for an obviousness type

rejection, and thus claims 9-14, and 23 are patentable over Luciano in view of Ohshima. Further,

even if French is considered, Luciano in view of Ohshima and further in view of French fail to

set forth a *prima facie* case of obviousness, as at least on limitation of claim 8 is not taught or

suggested by the applied references.

Dependent Claims 16, 17, 18, 19, 20, and 21

Dependent claims 16, 17, 18, 19, 20 and 21 depend either directly or indirectly from

independent claim 15. As has been previously explained, Luciano in view of Ohshima fails to

set forth a *prima facie* case of obviousness, as at least one limitation of claim 15 is neither taught

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nor suggest by the applied references. As French is non-analogous art, it may not be used for an obviousness type rejection, and thus claims 16, 17, 18, 19, 20 and 21 are patentable over Luciano in view of Ohshima. Further, even if French is considered, Luciano in view of Ohshima and further in view of French fail to set forth a *prima facie* case of obviousness, as at least on limitation of claim 15 is not taught or suggested by the applied references, as none of the applied references teach or suggest "the interaction of the simulated physical objects include performance tendencies.".

Independent Claim 22

Independent claim 22 recites several limitation, among them, "implementing a physics engine using physical object data and simulation rule data to numerically simulate an interaction of physical objects, thereby creating a simulated interaction, wherein the interaction of the physical objects includes performance tendencies." Neither Luciano nor Ohshima disclose or suggest a physics engine, or the interaction of the physical objects includes performance tendencies. As has been previously explained, French is non-analogous art that should not be considered. French describes a system that allows a person to move within a defined physical space and tracks the persons movements within this space using sensors to generate a video signal of the user. French, col. 8, ll. 23-34. Thus, French tracks *actual* movements of a user, and does not disclose the recited limitation of "implementing a physics engine using physical object data and simulation rule data to numerically simulate an interaction of physical objects, thereby creating a simulated interaction." The physics based information mentioned in French at col. 12 involves data generated by the actual motion of the user, not "physical object data and simulation rule data to numerically simulate an interaction of physical objects." Additionally, the disclosure in French in col. 36 additionally involves real-world application of forces on a user, not

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"implementing a physics engine using physical object data and simulation rule data to numerically simulate an interaction of physical objects, thereby creating a simulated interaction, wherein the interaction of the physical objects include performance tendencies." Therefore, even if French is considered, Luciano in view of Ohshima and further in view of French fails to set forth a *prima facie* case of obviousness, as at least one limitation of claim 22 is neither taught nor suggest by the applied references.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

A check in the amount of $1090 to cover the fees associated with the Request for Continued Examination and the additional claims. Should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Jenkens & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47079-00134USPT.

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